

REMARKS

Claims 4 and 10 are pending in this application, of which claim 4 has been amended and claim 10 is newly-added.

In response to the Office Action dated April 30, 2009, Applicants respectfully request reconsideration and withdrawal of the prior art rejections discussed below.

Claim 4 stands rejected under 35 U.S.C. §103(a) as unpatentable over Applicant's Admitted Prior Art (hereinafter "AAPA"), including JP Application Laid-Open Publication No. 2000-339894, in view of U.S. Patent 7,133,257 to Chang et al. (hereinafter "Chang et al.") in view of U.S. Patent 6,548,009 to Khlif et al. (hereinafter "Khlif et al."), in view of Tomohisa et al. (previously applied) and Kojima et al. (previously applied).

Chang et al. discloses a method for adjusting the twist, crown and camber of an air bearing surface of a slider to substantially match final target values for twist, crown and camber, the slider having a back surface opposite the air bearing surface. The method includes the steps of measuring the twist, crown and camber of the at least one slider. A first group of twist scribes may be formed on the back surface. A first group of crown and camber scribes are formed on the back surface. The twist, crown and camber of the slider are measured and compared to the final target values. Additional twist scribes may be formed if the final target value for twist is not reached or if the final target value is exceeded. Additional crown and camber scribes may be formed if the final target values for crown and camber are not obtained. FIGS. 5A and 5B show how scribe lines appearing in opposite corners can provide roll angle ("twist") in the positive or negative direction, as in the present invention, but Chang et al. fails to disclose the use of a laser to make the scribe lines.

Khlif et al. discloses an apparatus and method for controlling twist curvature of a disc head slider, where the slider has a bearing surface, a back surface, which is opposite to the bearing surface, a longitudinal axis and a transverse axis. The apparatus obtains a measure of the twist curvature of the bearing surface and

selectively alters material stresses in a working surface of the slider. The material stresses are altered asymmetrically with respect to the longitudinal axis and the transverse axis based on the measure of the twist curvature to induce a change in the twist curvature. Column 6, lines 29-42 and FIG. 4 disclose applying a laser beam to form a "melt pattern" asymmetrical to longitudinal and transverse axes X and Y.

Tomohisa et al. and Kojima et al. have been cited for teaching a "laser beam polarized in XY directions with a galvano scanner mirror and [which] is condensed with a long focal length lens," as recited in claim 4.

Applicants respectfully disagree. Tomohisa et al. discloses no more than a laser scanning beam B_P being "brought to a galvano mirror 13 to be polarized," and Kojima et al. discloses no more than the use of a condenser lens having a long focal length.

None of the cited references teaches, mentions or suggests that the laser beam is polarized in both X and Y directions, as recited in claim 4 of the instant application.

Thus, the 35 U.S.C §103(a) rejection should be withdrawn.

Claim 4 stands rejected under 35 U.S.C. §103(a) as unpatentable over AAPA in view of Chang et al., in view of Khlif et al., in view of U.S. Patent 6,984,802 to Kuroiwa et al. (hereinafter "Kuroiwa et al.").

Kuroiwa et al. discloses a laser material processing apparatus for processing a workpiece (22) in such a way as to separate one laser light (26) into two laser beams (26a, 26b) via first polarizer (25), one laser beam being passed via the mirrors (24), the other laser beam being scanned biaxially by a first galvano scanner (29), and conduct two laser beams (26a, 26b) to a second polarizer (27) for scanning via a second galvano scanner (30), wherein an optical path is constituted such that the laser beam (26b) transmitted through the first polarizer (25) is reflected by the second

polarizer (27), and the laser beam (26a) reflected by the first polarizer (25) is transmitted through the second polarizer (27).

Kuroiwa et al., like the other cited references, fails to teach, mention or suggest that the laser beam is polarized in both X and Y directions, as recited in claim 4 of the instant application.

Thus, the 35 U.S.C §103(a) rejection should be withdrawn.

Furthermore, claim 4 has been amended to recite additional features not disclosed in any of the prior art references cited above.

One such feature of the present invention resides in that the suspension is gradually curved by the laser irradiation such that the curved edge is perpendicular to the irradiation shape. As shown in FIG. 10A, the curved edge line of the suspension (the load curve portion 202 or the angle adjustment portion 212) extends in a perpendicular direction with respect to the sheet surface. In other words, the laser beam irradiation area irradiated by the laser beam curves about an imaginary line that is perpendicular to a direction along which the laser beam travels. The present invention uses the phenomenon depicted in FIG. 10A, so that the curve of the suspension is precisely adjusted. None of the cited references discloses the feature added to claim 4.

The amendments and arguments regarding claim 4 emphasize that the present invention utilizes the laser-irradiation phenomenon depicted in FIG. 10A. The feature added to claim 4 is disclosed in lines 4-5 on page 15 of the original specification. Furthermore, as specifically disclosed in lines 1-5 on page 23 of the original specification, a laser beam of a predetermined length and a predetermined shape is irradiated onto the laser beam irradiation areas 211, 213, and 214 of the load curve portion 202 and the angle adjustment portion 212, respectively. With this arrangement, a laser beam irradiation area including its surrounding area is curved, as shown in FIG. 10A.

With the conventional art, as disclosed in lines 13-17 on page 23, a laser beam is irradiated approximately perpendicularly or in slanting relative to the curve deformation direction. Therefore, as shown in FIG. 10B, a suspension 900 is sharply bent at an angle formed by a laser beam scanning line 901, which involves difficulty in high-precision adjustment.

Also, newly-added claim 10 recites that the irradiation shape of one embodiment of the present invention is differentiated from those of the cited references. None of the cited references discloses an irradiation shape containing first and second portions that are connected to each other and extend in first and second directions, respectively, as recited in claim 10.

Claim 4, as amended, and newly-added claim 10 are in condition for further examination.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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